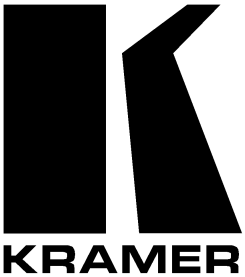
Kramer Electronics, Ltd.



USER MANUAL

Model:

VM-2C

1:2 Component Video DA

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1 Introduction

Welcome to Kramer Electronics (since 1981): a world of unique, creative and affordable solutions to the infinite range of problems that confront the video, audio and presentation professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 350-plus different models now appear in 8 Groups[1], which are clearly defined by function.

Congratulations on purchasing your **VM-2C** *1:2 Component Video DA*, which is ideal for the following typical applications:

- Component video signal distribution
- Video duplication studios, delivering undiminished quality duplicates

The package includes the following items:

- **VM-2C** *1:2 Component Video DA*
- Power adapter (12V DC Input)
- This user manual[2]

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high performance high resolution cables[3]

3 Overview

The Kramer TOOLS **VM-2C** is a high quality 1:2 distributor for component video (Y, Pb/Cb, Pr/Cr) signals that accepts one input and distributes the signal to two identical outputs using RCA connectors. In particular, the **VM-2C**:

- Is HDTV compatible
- Has a bandwidth of 500MHz
- Is 12VDC fed

1 GROUP 1: Distribution Amplifiers; GROUP 2: Video and Audio Switchers, Matrix Switchers and Controllers; GROUP 3: Video, Audio, VGA/XGA Processors; GROUP 4: Interfaces and Sync Processors; GROUP 5: Twisted Pair Interfaces; GROUP 6: Accessories and Rack Adapters; GROUP 7: Scan Converters and Scalers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from our Web site at http://www.kramerelectronics.com

3 The complete list of Kramer cables is on our Web site at http://www.kramerelectronics.com

To achieve the best performance:

- Connect only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your Kramer **VM-2C** away from moisture, excessive sunlight and dust

4 Your VM-2C

Figure 1 illustrates the **VM-2C** *1:2 Component Video DA*:

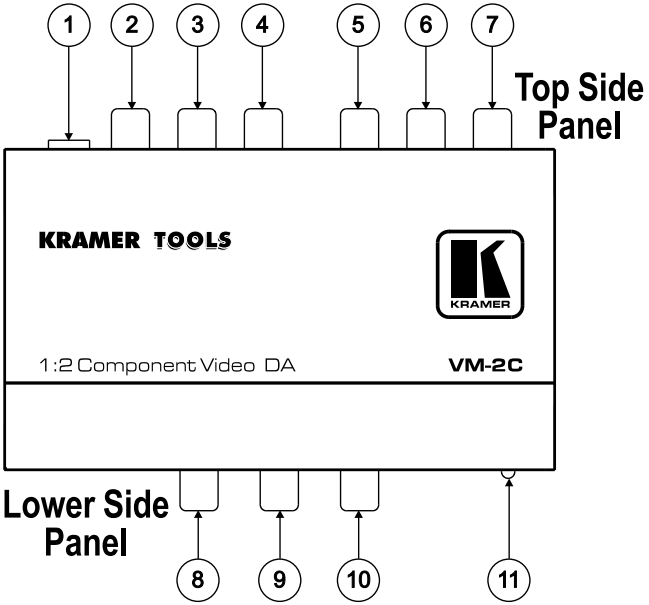

Figure 1: VM-2C 1:2 Component Video DA

Figure 2 illustrates the top side panel:

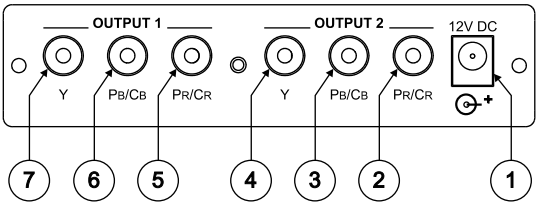

Figure 2: VM-2C 1:2 Component Video DA (Top Side Panel)

Figure 3 illustrates the lower side panel:

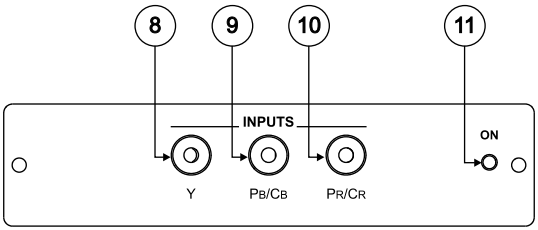

Figure 3: VM-2C 1:2 Component Video DA (Lower Side Panel)

Table 1: VM-2C 1:2 Component Video DA Features

#	Feature		Function
1	*12V DC*		+12V DC connector for powering the unit
2	OUTPUT 2	PR/CR RCA Connector	Connect to the component acceptor 2
3		PB/CB RCA Connector	
4		Y RCA Connector	
5	OUTPUT 1	PR/CR RCA Connector	Connect to the component acceptor 1
6		PB/CB RCA Connector	
7		Y RCA Connector	
8	INPUTS	Y RCA Connector	Connect to the component source
9		PB/CB RCA Connector	
10		PR/CR RCA Connector	
11	*ON LED*		Illuminates when receiving power

5 Connecting the VM-2C

To connect a **VM-2C** unit, as the example in Figure 4 illustrates, do the following[1]:

1. Connect a component video source (for example, a DVD player) to the Y, PB/CB, and PR/CR INPUT RCA connectors.
2. Connect the two sets of OUTPUT (Y, PB/CB, and PR/CR) RCA connectors[2] to up to two component video acceptors (for example, to two displays).
3. Connect the 12V DC power adapter (wall transformer) to the 12V DC socket and connect the transformer to the mains electricity (not illustrated in Figure 4).

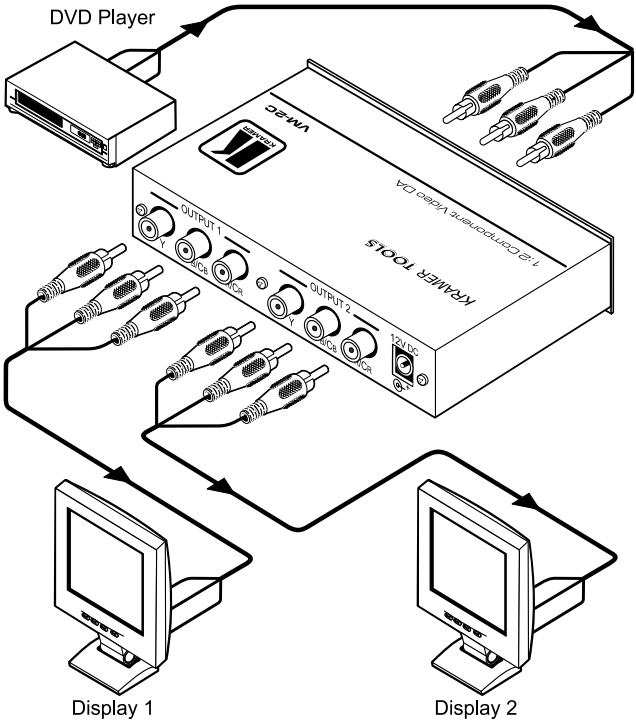

Figure 4: Connecting a VM-2C Unit

1 Switch OFF the power on each device before connecting it to your VM-2C. After connecting your VM-2C, switch on its power and then switch on the power on each device

2 When only one output is required, connect only that output, and leave the other output unconnected

6 Technical Specifications

Table 2 includes the technical specifications:

Table 2: Technical Specifications[1] of the VM-2C

INPUTS:	1 component video (Y, PB/CB, PR/CR, or Y, U, V) on RCA connectors, 1Vpp/75Ω
OUTPUTS:	2 component video (Y, PB/CB, PR/CR, or Y, U, V) on RCA connectors, 1Vpp/75Ω
MAX. OUTPUT LEVEL:	2.4Vpp
BANDWIDTH (-3dB):	510MHz
DIFF. GAIN:	0.03%
DIFF. PHASE:	0.03%
K-FACTOR:	<0.05%
S/N RATIO:	73dB weighted
CROSSTALK (all hostile):	–58dB @ 5MHz
COUPLING:	DC
POWER SOURCE:	12 VDC, 71mA
DIMENSIONS:	12cm x 7.5cm x 2.5cm (4.7" x 0.98" x 2.95"), W, D, H
WEIGHT:	0.3kg. (0.66lbs.)
ACCESSORIES:	Power supply, mounting bracket

1 Specifications are subject to change without notice

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
   - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
   - ii) Product modification, or failure to follow instructions supplied with the product
   - iii) Repair or attempted repair by anyone not authorized by Kramer
   - iv) Any shipment of the product (claims must be presented to the carrier)
   - v) Removal or installation of the product
   - vi) Any other cause, which does not relate to a product defect
   - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.
NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.
This equipment has been tested to determine compliance with the requirements of:

EN-50081:	"Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082:	"Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47:	FCC Rules and Regulations: Part 15: "Radio frequency devices Subpart B – Unintentional radiators"

CAUTION!

- Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- Use the supplied DC power supply to feed power to the machine.
- Please use recommended interconnection cables to connect the machine to other components.

For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found.
We welcome your questions, comments and feedback.

Safety Warning:
Disconnect the unit from the power supply before opening/servicing.

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P/N: 2900-000112 REV 1